

“LET ME SLEEP!”

WHY TEENS NEED MORE SLEEP, AND HOW POLICY COULD HELP



Q&A WITH THE EXPERTS

International sleep expert Dr. Wendy Troxel looks at why teenagers need more sleep than adults and shares some ideas about how school policy can help their students get more rest.



DR. WENDY TROXEL has been studying sleep and its relation to health for more than 15 years. She is a researcher at the RAND Corporation and a licensed clinical psychologist specializing in sleep medicine. Dr. Troxel has a Ph.D. in clinical and health psychology from the University of Pittsburgh and a bachelor's degree in psychology and theater from Bucknell University.

How much sleep do teens need?

We all need sleep. But our sleep needs change as we grow up. Adults need somewhere between 7 to 9 hours of sleep per night. Teenagers need around 8 to 10 hours of sleep per night. And younger children, toddlers, and infants need even more sleep. In fact, in the first few months of life, babies spend more time asleep than they do awake!

Would letting teens sleep in longer really help them do better in school and life?

Research suggests yes—more sleep will help teens do better and feel better. Getting enough sleep is important for teens' mental and physical health, and these are vital to doing well in school and sports. There are other benefits of later school start times. When schools start later, teens are more likely to show up for school. One school district that adopted a later school start policy saw a 25-percent reduction in student absences. Not surprisingly, studies also show that teens who are allowed to sleep more do better in school.

Many major medical organizations say that teenagers should start school later. These organizations include

the American Academy of Pediatrics and the American Medical Association and the Surgeon General of the United States. California has passed a law that says middle and high schools cannot start too early. Many school districts across the country are adopting later school start times. They base their decisions on solid scientific evidence. This evidence shows that later school start times are helpful to teenagers. This is an example of public policy at work.

What happens when teens don't get enough sleep?

The fact that teens, kids, and babies need more sleep than adults shows how critical sleep is to human development. Sleep affects almost everything about us.

Your brain: Sleep loss makes it more difficult to concentrate. It becomes harder to remember things and to pay attention. It is not surprising that teens who don't get enough sleep don't do as well in school. Sleep loss also affects emotions. One study of nearly 30,000 high school students showed that each hour of lost sleep was associated with a 38-percent increased risk of feeling sad or hopeless.



Your body: Research shows that sleep loss is linked with an increased risk of getting sick. Without enough sleep, for example, you might find yourself getting a cold more easily than others. People who are not sleeping enough are also more likely to have more-serious health problems, such as obesity, heart disease, and diabetes. Athletes who don't sleep enough tend to get hurt more easily and take longer to recover. In fact, almost all professional athletic teams and elite athletes have sleep coaches or programs to help them maximize their sleep and improve athletic performance.

Why don't teens get enough sleep?

There is a clash between human hormones and public policy, believe it or not.

Melatonin is a hormone that our brain releases to tell the body it is time to sleep.

darkness," is a hormone that tells us when it is time to sleep. Adults and younger children generally start to feel tired around 9:00 at night. This is when their bodies

Teenagers have sleep cycles that are different from those of adults and children. Melatonin, known as the "hormone of

start releasing melatonin. Teens' bodies are different. They start pumping out melatonin later, at about 11:00 at night. Their bodies keep releasing high levels of melatonin well into the morning. This means that teenagers are literally programmed to stay awake later and sleep in later.

However, most schools start around 8:00 in the morning or earlier. Early school start times have a direct effect on how much—or, really, how little—sleep American teens are getting. So, here's the problem: Teenagers' bodies are telling them to stay awake later and sleep in later. But they need to get to school at 8:00 a.m., five days a week! That can mean that they go to school tired. As a result, sometimes teenagers are not able to do their best. This is a public policy issue because school districts set policies about what time school should start.

What can teens do to improve sleep on their own?

We all could all do better if we limited our use of cell phones and computers at bedtime. Science also shows us why this is so. The blue light coming from electronic devices prevents our bodies from releasing melatonin. We know that teenagers' release of melatonin is already delayed, and the content consumed on social devices can also make it difficult to fall asleep. Using technology before bedtime can make it even harder to fall asleep.



References and additional sources of information

Gaspar, Laetitia S., Bárbara Santos, Ana Teresa Barros-Viegas, João Cardoso, Sara Varela Amaral, Catarina Carvalhas-Almeida, Ana Santos-Carvalho, Cláudia Cavadas, and Ana Rita Álvaro, “The Superpowers of Our Sleep,” *Frontiers for Young Minds* website, 2020. As of March 30, 2022:

<https://kids.frontiersin.org/articles/10.3389/frym.2020.540052>

James, Emma, Ann-Kathrin Joechner, and Beate E. Muehlroth, “From ZZZs to AAAs: Why Sleep Is an Important Part of Your Study Schedule,” *Frontiers for Young Minds* webpage, 2020. As of March 30, 2022:

<https://kids.frontiersin.org/articles/10.3389/frym.2020.00051>

Troxel, Wendy, “Teens Are Sleep Deprived; Later School Start Times Could Help,” *RAND Blog*, March 4, 2020. As of March 30, 2022:

<https://www.rand.org/blog/2020/03/teens-are-sleep-deprived-later-school-start-times.html>

Troxel, Wendy, “Why School Should Start Later for Teens,” *Ted Conferences* video, November 2016. As of March 30, 2022:

https://www.ted.com/talks/wendy_troxel_why_school_should_start_later_for_teens?language=en

This tool describes work documented in *Engaging Youth with Public Policy: Middle School Lessons to Counter Truth Decay*, by Andrea Prado Tuma and Alice Huguet, TL-A387-1, 2022 (available at www.rand.org/t/TLA387-1). The RAND Corporation is a research organization that develops solutions to public policy challenges to help make communities throughout the world safer and more secure, healthier and more prosperous. RAND is nonprofit, nonpartisan, and committed to the public interest. RAND’s publications do not necessarily reflect the opinions of its research clients and sponsors. **RAND**® is a registered trademark.

Limited Print and Electronic Distribution Rights: This publication and trademark(s) contained herein are protected by law. This representation of RAND intellectual property is provided for noncommercial use only. Unauthorized posting of this publication online is prohibited; linking directly to its webpage on rand.org is encouraged. Permission is required from RAND to reproduce, or reuse in another form, any of its research products for commercial purposes. For information on reprint and reuse permissions, please visit www.rand.org/pubs/permissions.

Title image: Pollyana Ventura/Getty Images
Sleeping male teen: skynesher/Getty Images
Sleeping female teen: andreswd/Getty Images